A POST INCIDENT ANALYSIS PROGRAM FOR THE LUBBOCK FIRE DEPARTMENT

EXECUTIVE LEADERSHIP

BY: Lewis Treadwell
Lubbock Fire Department
Lubbock, Texas

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ABSTRACT

The problem identified for this applied research project was that the Lubbock Fire Department had no formal Post Incident Analysis program to evaluate the effectiveness of its operations at emergency incidents. It was the purpose of this project to evaluate the feasibility of developing a Post Incident Analysis program for the Lubbock Fire Department.

Action research was the method used to answer the following questions: What Post Incident Analysis programs have been developed by other fire departments? What type of information should be collected in a Post Incident Analysis? What are the pitfalls that limit the effectiveness of a Post Incident Analysis? When should a Post Incident Analysis be conducted?

Procedures that were used to complete this research included a literature review of fire service journals, applicable national standards, Internet search for on-line standard operating procedures, and telephone interviews with area fire departments. An internal survey was emailed to all Lubbock Fire Department fire suppression personnel.

Research results showed that the implementation of a formal Post Incident Analysis program is feasible for the Lubbock Fire Department. In order for the program to be effective, focus should be on operational successes, outcomes, problem areas, and reinforce the use of accepted policies and procedures.

Recommendations included: incorporating a formal Post Incident Analysis program into department standard operating procedures, future development of Post Incident Analysis worksheets for specialized responses, document and distribute Post Incident Analysis report by publishing on LFD intranet, training of officers prior to implementation of the Post Incident Analysis program about the objectives of the program and how to properly conduct an analysis, include training on the Post Incident Analysis program in the new lieutenant orientation program.

It was also recommended that fire departments that do not have a formal Post Incident Analysis program should develop and adopt a program.

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INTRODUCTION

The Lubbock Fire Department (LFD) provides fire and life safety services to a population of approximately 200,000 citizens in a 130 square mile area. In 2001 the LFD responded to 11,331 calls, with 986 classified as fire calls. Structure fires accounted for 294 of these fire calls.

In 1999, the District Chief's (DC's) command vehicles that respond to structure fires were equipped with video cameras. It is LFD policy that all incidents to which the command vehicles respond be videotaped. The Deputy Chief of Operations and the training division review these videotapes. Review of these videotapes has shown that the department has some problems with violations of safety principles such as: improper wearing of personal protective equipment (PPE), ineffective deployment or lack of assigned rapid intervention teams (RIT), ineffective use of the incident command system (ICS), improper use of standard operation procedures (SOP's), or disregarding SOP's altogether.

The original intent was that DC's review these emergency incident videotapes with their personnel in an informal Post Incident Analysis (PIA), leading to improvement in these areas. However, the LFD does not have a policy or SOP that requires, or even recommends a PIA be conducted. Consequently, DC's have not been conducting PIA's with his or her personnel. A review of the videotapes shows the same safety problems keep reoccurring and very little improvement in fire ground operations has been shown.

Two authors discuss the importance of conducting a PIA. Frank Montagna (1996) relates, "One mechanism for turning a mistake into a lesson is the postfire critique" (p. 63). Alan Brunacini (1991) states:

> Regular, well-managed fire critiques improve fire fighting performance. Standard operating procedures (SOPs) and training *before* a fire, and critiques and revision *after*

> one, make up a complete system that, as I said in the May/June "Fire Command" column, prepare us for the most important fire we will ever fight—the next one. (p. 106)

Even though the LFD does not have a requirement for PIA's to be conducted, the LFD has held PIA's for some incidents that have occurred in the past. The Fire Chief or Deputy Chief usually calls for these PIA's after a major incident, but not all major incidents. As a result, personnel have the perception that the only time a PIA is conducted is when the chiefs want to discipline the firefighters for mistakes at the incident. This leads firefighters to react defensively during the PIA, resulting in no improvement in emergency operations.

The problem is that the LFD has no formal Post Incident Analysis program to evaluate the effectiveness of its operations at emergency incidents. As a result, areas for improvement have not been identified and acted upon to improve operations at emergency incidents.

The purpose of this research project is to evaluate the feasibility of developing a PIA program for the LFD. Action research was the method used to answer the following questions so that the feasibility of implementing a PIA program for the LFD could be evaluated.

1. What Post Incident Analysis programs have been developed by other fire departments?
2. What type of information should be collected in a Post Incident Analysis?
3. What are the pitfalls that limit the effectiveness of a Post Incident Analysis?
4. When should a Post Incident Analysis be conducted?

BACKGROUND AND SIGNIFICANCE

The LFD does not have a formal PIA program in place and there is nothing written in the LFD procedures manual that requires, or even recommends that a PIA be conducted for incidents to which LFD personnel respond. It is left to the judgment of the Incident Commander (IC) or

individual company officer as to whether a PIA is conducted. Consequently, very few PIA sessions are held. In 2001 the LFD responded to 294 structure fires, and 71 of these structure fires exceeded $10,000 in damage with 7 exceeding $100,000 in damage. Training record review indicates that four individual company PIA's, and one multi-company PIA were held in 2001.

As stated earlier, the LFD videotapes all incidents that the DC's respond to. Review of these tapes has shown that the LFD faces some significant safety issues on the emergency scene that need to be corrected. If not corrected, these safety problems will lead to injuries and possibly the death of a Lubbock firefighter. According to Frank Montagna (1996), "Firefighters, as all humans, make mistakes. When firefighters make a mistake on the job, however, it can be life-threatening to themselves, to their coworkers, and to the public they serve" (p. 63). Montagna (1996) further relates, "Our goal should be to learn from each mistake and to try not to repeat it. We should also teach others not to make the same mistakes we made" (p. 63). A PIA is a tool to allow firefighters to learn from their mistakes, if it is properly conducted, and leads to improved firefighter safety on the emergency scene.

The LFD has no standardized format for conducting a PIA and does not train its personnel in how to effectively manage a PIA. The few PIA sessions held have been poorly organized and have not been effective. The perception of most of the LFD firefighters is that the only time a PIA is conducted is when someone makes a major mistake at an incident. This has led to firefighters participating in the PIA being defensive about their actions at the incident. Alan Brunacini (1991) states:

> It's hard to build much confidence in an unpredictable event that is conducted by a critique officer without a standard script or system for evaluating what happened at the

> fire. An effective critique system depends on the feelings and trust of the participants. (p. 106)

Without a formal PIA program in place, the trust of the firefighters is not present, and as a result, no positive changes in behavior result from the few PIA's that are conducted in the LFD.

The multi-company PIA that occurred in 2001 was based on a confined space incident in which a worker at a food plant opened a hatch on the top of a vegetable oil storage tank to look inside. The vapor space above the oil was oxygen deficient. As the worker looked inside the tank, he became unconscious and fell into the tank, face down in the oil. The LFD responded to the incident with the closest fire station and the heavy rescue team. Prior to the heavy rescue team's arrival, a firefighter from the first in unit made entry into the tank. The small size of the opening prevented the firefighter that entered the tank from donning self contained breathing apparatus (SCBA). The atmosphere inside the tank was not assessed or tested prior to entry, and the firefighter made entry without a retrieval system in place and removed the victim. The victim was taken to an area hospital but did not survive the incident.

The Deputy Chief who did not respond to the incident, but is very knowledgeable in confined space operations, realized that the LFD was fortunate that it did not suffer a firefighter fatality in this rescue attempt. The Deputy Chief called for the PIA to review LFD operations at this incident. Personnel attending the PIA felt they were going to be criticized for their actions and were extremely defensive about the actions that were taken at this incident. According to Bernard Dyer (1995), "The goal of a critique is to increase awareness, examine actions to improve future performance and to change behavior" (p. 54). This did not happen as a result of this PIA.

Even though this PIA may not have changed the behaviors of those that participated in the rescue attempt, there were many valuable lessons that could have been learned from this incident. However, the results of this PIA were not distributed throughout the department. Alan Brunacini (1991) feels that an important part of a PIA should be to distribute the findings of a PIA throughout the organization and a standard written PIA report should be used for this purpose. Because the LFD has no SOP or standardized format for conducting a PIA, there has been no consistency in the LFD as to how, when, or even if a PIA should be held. As a result, of the few PIA's held, personnel come into them with a negative attitude instead of an open mind. Whether called a PIA, critique, or after action report, the goal of a PIA should be to improve the performance of an organization. Without a formal PIA program in place, improvement has been slow or nonexistent for the LFD.

The National Fire Academy (NFA) Executive Leadership (EL) course was instrumental in evaluating the feasibility of developing a PIA program. The EL class focused heavily on the use of analysis and discussion of case studies to illustrate both the good and bad decisions of the case study. More importantly, it also led to discussion of alternative solutions to the problems encountered in the case study and the benefits that might be derived from these alternative solutions to the problems. The same methodology used to make the EL class effective, such as study of succession/replacement planning, influencing styles, and persuasion modules is directly applicable to evaluating the effectiveness of a formal PIA program.

This research also addresses the United States Fire Administrations operational objectives of reducing the loss of life from fire and to appropriately respond in a timely manner to emergent issues by evaluating the potential impact a formal PIA program could have in these areas.

LITERATURE REVIEW

A literature review was conducted to determine the effectiveness and benefits of PIA programs, and whether it was feasible to implement a formal PIA program for the LFD. The literature discussed both formal and informal PIA's and the benefits derived from them. PIA programs are not new to the fire service and are utilized by other organizations to improve their operations. Hugh Strawn (1986) states:

> After action reports have been used for centuries by military organizations permitting commanders to learn from the failures and successes of other military officers. During the Vietnam war, military officers who took the time to research the after action reports of other units in their area of operation usually found sufficiently valuable information on the enemy's tactics that their soldiers were able to survive in a very hostile environment. (p. 47)

The use of a PIA as a learning and training tool was discussed by several authors. Bernard Dyer (1995) states, "The value of a critique or postincident analysis as a learning tool is well established. What's needed is to use this technique, whether formally or informally, on a continuous basis" (p. 55). Frank Montagna (1996) states, "Taking the time to hold a critique will result in a better trained and better coordinated firefighting team" (p. 66).

According to *Firefighting Strategy and Tactics,* in the past firefighters could use their experience at serious fires to train and become better based on their response to the volume of working fires. However, with the reduction of actual working fires, firefighters are having fewer opportunities to develop their skills through actual experience. The use of a PIA allows departments to train firefighters through the experience of others and helps develop these firefighting skills (Angle, Gala, Harlow, Lombardo and Maciuba, 2001).

Michael Rowley (1993) adds that not only the reduction in fires, but also the retirement of veteran firefighters causes a loss of experience in the department. The use of a PIA can be used as a mentoring tool to pass knowledge from one generation of firefighters to another.

A PIA allows firefighters to obtain a more global perspective of all the operations at an incident, rather than just the part they played in bringing the incident under control. Thomas Brennan (1996) states:

> One of the most important results of always conducting this critique is that each member begins to understand the entire operation and his or her part in it. It is result-oriented. Each position or assignment begins to have a "why" and "how important" to it. (p. 86)

Another benefit listed in the literature review is the ability to evaluate if SOP's were adequate, or if they are in need of revision. Mark Morgan (1994) states:

> The post-incident review process clearly provides an opportunity to learn from disasters and crises. Applying lessons learned to your disaster and crisis management program allows you to bring your procedures into focus with reality, and more importantly, it enables you to use the incident as a means of improving your program to better prepare for future situations. (p. 20)

Morgan (1994) further adds, "Post-incident review (PIR) is an evaluation of incident response used to identify and correct weaknesses, as well as determine strengths and promulgate them" (p.18). Gary Morris (1988) agrees, by stating, "Incident critiquing can produce significant benefits when properly administered. It can improve future performance by identifying training needs and correcting any deficiencies in plans, procedures or protocols" (p. 14).

If PIA's can be a valuable learning tool and help review the effectiveness of SOP's and operations at an emergency scene, why aren't more PIA's conducted? One possible answer to this question is given by Theodore Jarboe (1986) in that:

> Historically, the word critique has had, and perhaps continues to have, a certain stigma attached to it. Critiques have been referred to as "tail-chewing" sessions or chances to "point the finger." Obviously, no one would want to attend a critique if he believes that he will be taken to task, ridiculed or threatened because of his performance during the incident. (p. 51)

Steve Kidd (2001) similarly relates, "If your department works like most I know, you only critique events when something goes wrong. Being our own worst critics, we tend to beat up on ourselves for our mistakes" (p. 25). According to Alan Brunacini (1991) "To be effective, the system must be essentially critical, honest, and constructive. Fire fighters are tough, skeptical folks who develop habits based mainly on experience. If critiques become bloodbaths, the casualties will hide out and warn others" (p. 105).

The literature suggests the purpose behind a PIA should not be to lay blame, but to improve for the next operation. Douglas Cline (1999) states:

> The information and knowledge gained in a critique is extremely valuable. This information can be used in the future to make tactical decisions that could mean the difference between a successful operation that reduces the amount of damage or the life and death of a crew. (p. 1)

James Smith (1994) further relates, "The critique is meant to reconstruct events and assess how the fire department performed. What worked well? Where is improvement needed? Do SOPs need revision or modification?" (p. 16).

The literature suggests that a PIA should not be held only for incidents where things went wrong. According to Roger McGehee (1999) "Even an incident that can be termed 'successful' can reveal in a postcritique valuable lessons that can be used to improve future operations" (p. 117). Frank Montagna (1996) further relates that a PIA should not just be held for incidents where things went wrong, but it is also important to hold a PIA at incidents where things went well as this allows inexperienced firefighters to learn from experienced firefighters. By utilizing this approach, hopefully, it will counter the perception that a PIA is only held when things go wrong and is only used as a discipline tool.

A PIA is just one tool that can be used to make a fire department more efficient and effective. Harry Carter (2001) states, "By combining the post-fire critique with a program of drills, training and education, you can adopt a proactive approach to improving your suppression operation. You owe that to your troops—and to the people you protect" (p. 66). Carter (2001) goes on to list how a critique can improve performance on the emergency scene by improving teamwork and individual performance, how to do things better on the emergency scene and to avoid accidents while working.

In summary, the consensus of the authors researched is that a PIA can be a valuable learning tool for fire departments. These programs can help improve operations at emergency incidents and should be utilized more frequently. Benefits of using a formal PIA program include its uses as a learning and training tool, and as a mentoring and succession tool. This program will help identify current weaknesses at emergency operations as well as identifying strengths and providing the opportunity to reinforce these strengths. A formal PIA program presents an opportunity to review SOP's, allows input on their effectiveness, and determines need for change or update. The literature review has shown this author that the

implementation of a formal PIA program for the LFD is feasible and can lead to improved firefighter effectiveness and safety at emergency operations and improved service delivery for the citizens of Lubbock.

PROCEDURES

Action research was the method used in evaluating the feasibility of developing a PIA program for the LFD. The research procedures used in preparing this paper began with a literature review at the Learning Resource Center (LRC) at the NFA in March of 2002. Additional literature reviews were conducted from March through May of 2002 at the Mahon library and the LFD Training Academy library located in Lubbock, Texas.

The literature targeted fire service texts, magazines, journals, and prior Executive Fire Officer (EFO) applied research projects (ARP) for the rationale in conducting PIA's. Applicable standards, such as National Fire Protection Association (NFPA) standards, were also researched to understand their requirements or recommendations regarding PIA. An Internet search was conducted to determine if any fire departments published SOP's regarding PIA programs.

Telephone interviews were conducted with 10 fire departments in an effort to determine which departments were conducting PIA's. Personnel from these departments were contacted on the following dates: May 22, 2002, District Chief Ken Tyner, Houston Fire Department. May 23, 2002, Administrative Services Commander Lance Wiseman, Hobbs Fire Department; Emergency Management Officer Sean Hughes, North Richland Hills Fire Department. May 28, 2002, Assistant Chief Clifford Balzer, Midland Fire Department; Assistant Chief Tim Sendelbach, Missouri City Fire Department. June 2, 2002, Battalion Chief Raymond Sparks, Garland Fire Department. June 5, 2002, Training Officer Don Burris, Plainview Fire Department. June 7, 2002, Assistant Chief Henry Fry III, Flower Mound Fire Department. June

11, 2002, EMS Coordinator Glen Hughes, Odessa Fire Department. June 14, 2002, Training Chief Alan Stork, Plano Fire Department. The interview questions asked are listed in Appendix E. Those departments with SOP's were asked to fax or mail them to the LFD training academy. Four of the departments contacted had PIA SOP's in place and these are discussed in the Results section.

A survey was emailed to all LFD fire suppression personnel to determine attitudes and perceptions they may have about informal PIA's they have participated in the past, and whether they perceived these PIA's as being beneficial. The survey also asked what type of incidents should require a PIA and who should facilitate the PIA. The data was collected into a Microsoft Excel spreadsheet to track and total each response. Questions asked and results of this survey are located in Appendix F. To provide an accurate representation of the respondent's attitudes towards PIA's, all written comments were included in the report. These attached comments were not corrected for grammar or spelling of the respondents and are attached in Appendix F. Survey results are discussed in the Results section.

Limitations

Telephone interviews were conducted with 10 fire departments in a limited geographical area to determine if they had incorporated PIA programs into their departmental operations. Due to this limited telephone survey, the information gathered from these departments should not be considered representative of the fire service.

A survey was emailed to all 239 suppression personnel. The purpose of the survey was to determine attitudes and perceptions of LFD personnel toward the department's use of a PIA in the past, and whether they thought the program could be beneficial to the department. This

emailed survey was opened by 187 firefighters, with 72 of these personnel completing and returning the survey. This was a 40 percent response rate for those personnel that opened this email. This response rate may not give a true indication of departmental attitudes about a PIA program. However, the results were beneficial in that some of the concerns expressed in the survey will need to be addressed in a formal PIA program to ensure its effectiveness.

Definition of Terms

After action report. For the purposes of this report, an after action report will have the same definition as a PIA.

Critique. For the purposes of this report, a critique will have the same definition as a PIA.

Post Incident Analysis. A formal or informal critique session following an incident. Typically, operational successes, outcomes, and problem areas are brought to light to avoid future problems and to reinforce the use of accepted policy and procedures.

Standard Operating Procedure. An organized directive that establishes a standard course of action.

Working structure fire. A fire in a structure where the atmosphere is immediately dangerous to life and health requiring the use of SCBA and the use of a 1-¾ inch preconnected hand line as a minimum is required for fire extinguishment.

RESULTS

What Post Incident Analysis programs have been developed by other fire departments?

Of those fire departments contacted in a telephone survey, 4 of 10 had SOP's in place for conducting a PIA. Two departments utilized a standardized PIA checklist to help guide the PIA. Those departments that did not have SOP's in place did conduct PIA's, but they were not required by SOP's.

The Hobbs Fire Department's (2000) SOP leaves the decision up to the IC as to which incidents require a PIA. These PIA's are to take place once all equipment is back in service. During the PIA both the strong and weak points are to be discussed. The PIA is designed to evaluate job performance, SOP's, and to help increase team efficiency.

Odessa Fire Department's (2001) SOP requires personnel to conduct a PIA on all major or significant events, but leaves the decision on when to conduct the PIA to the Battalion Chief (BC) or officer in charge. The PIA is supposed to take place as soon as possible after the event. The goal of the program is to review the overall quality of services provided, improve procedures, improve incident operations and identify training needs. Odessa's SOP also encourages the use of a PIA after any incident.

Midland Fire Department's (1994) SOP leaves it up to the BC as to when to conduct a PIA, but anyone involved in the incident can request a PIA be held. Midland uses a check off type form to help guide and evaluate the fire department operations at the incident.

Plano Fire Department's (1995) SOP requires PIA's on fire and emergency medical incidents. Plano has two levels of PIA's. Informal PIA's are used for minor incidents and consist of discussion between the officer in charge and personnel involved in the incident. If significant issues are raised, the officer is required to send a memo to all involved companies summarizing the discussion. A formal PIA is held for all structure fires, mass casualty incidents, or other major operations. A specific time and place is designated so all personnel, including support agencies, can participate. The Duty Chief in charge of the incident acts as facilitator for the PIA and uses the following format to guide the PIA: The alarm, response, conditions on arrival, initial actions, continuing actions, problems encountered and possible solutions, and positives of the incident. Plano also utilizes a list of management factors to help evaluate the

incident. The results of this formal PIA are documented and distributed throughout the department.

All the fire departments contacted use a chief officer of DC or higher rank to help facilitate the PIA, and none of the departments contacted train their officers in how to formally conduct a PIA. The six fire departments that did not have an SOP for PIA's all stated they did conduct PIA's for major incidents they respond to. All 10 departments felt their PIA program was or is effective.

An Internet search of online SOP's showed that three other fire departments had SOP's regarding the use of PIA's. The Charlottesville Fire Department (1994) conducts three levels of PIA's. The first is an informal PIA, which is an informal discussion of events that took place at an incident. Company officers are responsible for initiating the informal PIA. Overall operational improvement and training tips are emphasized during the informal PIA. The second type of analysis is called a semi-formal PIA, and the officer in charge is responsible for initiating this PIA. This PIA is a platoon level discussion of emergency incidents, and is more detailed than the informal PIA, and its focus is on overall operational improvements. The third type of analysis is called a formal PIA, which is designed to involve all levels of the fire department. The formal PIA is a detailed analysis of major emergency operations. The formal PIA is initiated by the officer in charge and is even more detailed than the semi-formal PIA. A scribe is appointed to take notes, and the BC is responsible for preparing a summary of the PIA and distributing it to all involved officers.

The Arlington County Fire Department (1998) requires a PIA to be completed for all working fires or any incident where task force or greater alarm units were used. Company officers are required to write a PIA in memorandum form and forward it to the BC within three

days of the incident. The BC then compiles and forwards this PIA to the Operations Division along with his incident report within nine days of the incident. The PIA is then placed in the PIA manual for departmental distribution. The PIA focuses on the Incident Management System, problems encountered, lessons learned and reinforced, and a summary of the incident.

The Phoenix Fire Department (2002) conducts PIA's on major or significant incidents, but formal departmental PIA's are held at the discretion of the Tactical Services Chief. Phoenix utilizes five levels of critiques. The Individual PIA involves the individual company and is facilitated by the company officer. No documentation of the PIA is required. The Company level PIA is conducted on site prior to leaving the scene. This PIA is initiated by Command or the BC. Battalion level PIA's are initiated by the BC and utilize a structured PIA format. BC's are required to fill out a PIA form and forward this form to the Tactical Services Section. Operations level PIA's are conducted within the battalion by the BC or Shift Commander. This level is utilized for first or multiple-alarm incidents, which are uncomplicated in nature and did not require a large response of departmental resources or outside agencies. A PIA summary is completed and forwarded to the Tactical Services Section. Departmental PIA's are used for large scale or complex incidents involving a large response of fire department resources and several outside agencies. A chief officer is selected to conduct the PIA and a critique summary is completed and forwarded to the Tactical Services Section.

The Phoenix Fire Department may utilize a critique sector at major incidents and a training academy officer responding to the scene automatically activates this sector. Phoenix also uses a PIA questionnaire for the officer to complete and return to the BC. A standardized PIA format has been developed and utilized for structure fires, major medical incidents, and hazardous material incidents to help guide the discussion. Phoenix recommends that the PIA

be limited to 1 to 1-½ hours in duration if possible.

What type of information should be collected in a Post Incident Analysis?

The information collected should be a reflection of the goals and objectives of the PIA program. This information should focus on improving safety at the incident. NFPA 1500: *Standard on Fire Department Occupational Safety and Health* (2002 ed.) requires the following items should be included in the analysis:

8.8.3 The analysis shall conduct a basic review of the conditions present, the actions taken, and the effect of the conditions and actions on the safety and health of members.

8.8.4 The analysis shall identify any action necessary to change or update any safety and health program elements to improve the welfare of members.

8.8.5 The analysis process shall include a standardized action plan for such necessary changes.

8.8.5.1 The action plan shall include the change needed and the responsibilities, dates, and details of such actions.

NFPA 1500*: Standard on Fire Department Occupational Safety and Health Program* (2002 ed.) also requires involvement of the fire department safety officer in the PIA as defined by NFPA 1561. Requirements under NFPA 1561: *Standard on Emergency Services Incident Management System* (2002 ed.) include:

5.12.1 The incident safety officer shall participate in the post incident analysis.

5.12.2 The incident safety officer shall prepare a written report for the post incident analysis that includes pertinent information about the incident relating to safety and health issues.

5.12.3 The incident safety officer shall include in the post incident analysis information about issues relating to the use of protective clothing and equipment, personnel accountability system, rapid intervention crews, rehabilitation operations, and other issues affecting the safety and welfare of members at the incident scene.

According to *Hazardous Materials, Managing the Incident* (Noll, Hildebrand and Yvorra, 1995), a PIA involving hazardous materials incidents should focus on five key topics including: Command and control, tactical operations, resource support services, plans and procedures, and training. Dan Friend (1995) recommends that problem identification and solutions recommended for size up, communications, ICS, strategy and tactics, safety, resources, and outside agencies be addressed in the PIA.

Theodore Jarboe (1986) suggests that some of the issues incorporated into the PIA include background of the incident, strategy and tactics, firefighter safety and welfare concerns, reports from officers and firefighters, along with recommendations for improvement. Alan Brunacini (1991) emphasizes that the PIA works best when the firefighters evaluate their performance against the SOP's for that incident. This leads to the PIA being driven by both the lessons learned and lessons reinforced and allows the PIA to focus on what worked well and what could be done better the next time.

Firefighting Strategy and Tactics (Angle et al., 2001), recommends that components of a PIA should focus on personnel, equipment, resources and operational effectiveness, and that the objective of the PIA is to examine how the incident was handled and what SOP's need to be changed or added for the next incident. According to Barry Baker (1997) the key to a successful PIA is placing emphasis on actions, not individuals.

James Kefalas and Scott Weninger (2000) recommend videotaping your incidents as, "This is an invaluable tool when reviewing our own actions. It provides an added dimension during a critique that allows crews and individuals to examine their actions" (p. 38). The use of the videotape helps set the timeline of the incident and also captures all radio traffic occurring during the incident. Kefalas and Weninger (2000) caution that use of video is a very powerful tool and must be used in a non-threatening way.

Once the information from the PIA is collected, it should be put in written form and distributed throughout the department. This ensures that not only participants at the incident learn valuable lessons during the PIA, but those not at the incident or PIA will also learn valuable lessons.

What are the pitfalls that limit the effectiveness of a Post Incident Analysis?

In order for the PIA to be effective, it is important that all participants be open and honest about their actions during the incident. Hindsight is always 20/20. We can always think of things that could be done better or differently if we had the chance to do them over. Frank Montagna (1996) states, "At any given fire, you can expect to make a mistake—sometimes several mistakes" (p. 63). The consensus of the literature reviewed suggests that one of the mistakes made in PIA's is assigning blame for the mistake to an individual rather than identifying the root cause and correcting it. Dan Friend (1995) discussed this point, in that many firefighters hold the view that PIA's may be beneficial, but it usually turns into an effort to assign blame for what went wrong at the incident. This can have a chilling effect on the quality and usefulness of the PIA. Roger McGehee (1999) suggests that if the PIA starts with a threatening tone, the outcome of the PIA will be one of apprehension and non-productivity.

Harry Carter (2001) says that if the firefighters are defensive nothing positive will be gained from the PIA process. Carter (2001) further adds: "It is very important that each member of the team speak openly and honestly. This session is not for blame or apologies. It is a fact-finding session" (p. 65). Alan Brunacini (1991) points out that the reputation of the PIA process is very important to an organization and firefighters develop positive feelings and support for the PIA process when it is managed in a constructive and supportive way. Michael Rowley (1993) states, "Keep the critique constructive. It shouldn't be used as an excuse to criticize someone else's mistakes. The reason for the critique is not to blame but to learn" (p. 12).

Another pitfall to be avoided in a PIA is not to just focus on the actions of firefighters at the scene. The whole overall incident should be a part of the PIA process, including command decisions (Carter, 2001).

The selection of a moderator or facilitator for the PIA is vital to the outcome of the PIA. Theodore Jarboe (1986) states: "How the critique is orchestrated and how the moderator couches his comments will quickly set the stage. If the critique is presented in a positive, sincere way, the results will probably be positive" (p. 51). Gary Morris (1988) suggests that the right selection of a PIA officer can place participants in the PIA process at ease and help with drawing out information from the firefighters. Morris goes on to say that the IC might not be the best choice as the moderator and it may be preferable for someone else to lead the PIA. A LFD survey asked the question about who should facilitate the PIA; 64 percent thought the IC or company officer should facilitate the PIA with 18 percent feeling someone not involved in the incident should be the facilitator. Only 4 percent felt the Chief or Deputy Chief should facilitate the PIA.

Surveyed LFD firefighters reported that a PIA was conducted for only 10 percent of working structure fires in 2001. Of these PIA's, 55 percent of the firefighters felt the PIA was effective and 36 percent felt the PIA was not effective. According to the survey only 9 percent of the firefighters that responded did not participate in a PIA in 2001. Ninety six percent of the firefighters thought a PIA could be beneficial if it was properly conducted.

When should a Post Incident Analysis be conducted?

The literature stressed two types of PIA's, formal and informal. Tom Brennan (1996) expressed a concern that a formal critique is usually held too late after the incident, and that many of the responders may not be in attendance at the critique due to vacations, sick leaves, and shift swaps. Brennan recommends that a critique be held immediately after companies are released and before they begin taking up equipment from the scene. Brennan feels this allows all who participated in the incident to be present, actions taken are fresh in everyone's minds, and the apparatus and equipment are still laid out for review during the critique.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program* (2002 ed.) requires that, "The fire department shall establish requirements and standard operating procedures for a standardized post-incident analysis of significant incidents or those that involve serious injury or death to a firefighter (8.8.1). *Hazardous Materials, Managing the Incident* (Noll et al., 1995) states that: "OSHA requires that a critique be conducted for every hazardous materials emergency response" (p. 496).

Michael Rowley (1993) recommends that a PIA be held after any fire or emergency immediately on return to the station. His reasoning is that the incident is still fresh on everyone's mind and members are more likely to participate. Rowley feels that if the PIA is put off for a

few days the personnel that participate are more likely to be defensive about their actions and as a result, limit the effectiveness of the PIA.

Bernard Dyer (1995) expressed a concern about PIA's only being conducted for major emergencies. If all other incidents are handled with no PIA being conducted, nothing is learned from these routine incidents. Dyer (1995) states, "It doesn't have to be a large incident; any incident or response can be the basis for an informal critique" (p. 54).

These PIA's that take place at the incident or immediately upon return to the station can be classified as informal PIA's. The literature review showed that even though the authors recommended these informal PIA's as being important, there is still a need for formal PIA's. James Smith (1994) recommends a formal PIA after most major emergencies or significant events, and those personnel who where at the incident be invited and required to attend. Theodore Jarboe (1986) recommends holding a PIA following a serious fire, rescue incident, firefighter or civilian injury, or any unusual incident. According to Douglas Cline (1999) the formal PIA should be held within 48 hours of the incident.

In a survey of LFD personnel, 78 percent of personnel felt a PIA should be conducted for second or greater alarm fires. In addition, personnel felt the following types of incidents should have a PIA held: Hazardous materials incident 68 percent, heavy rescue responses 64 percent, dive rescue incidents 58 percent, first alarm working structure fires 54 percent, and medical calls 32 percent. That it should be left to the IC's discretion on when to hold a PIA was agreed with by 53 percent of the personnel that responded to the survey.

Whether a PIA is formally or informally conducted is not important. What is important is that the PIA takes place. Barry Baker (1997) relates, "One critical factor to organizational effectiveness is analysis of what an organization is doing, how it can be improved, and creating a

process where this can take place on a continuing basis" (p. 15). Conducting a PIA meets this goal. Brad Brenneman (1996) recommends that PIA's be conducted more frequently because the more PIA's firefighters participate in the more comfortable they will be with the process.

DISCUSSION

The research has shown that a PIA can be an effective tool for fire departments to use so they can increase the effectiveness of service delivery. According to Harry Carter (2001) the use of a PIA has several valuable positive impacts including:

- Medium for developing individual and team skills
- Allows firefighters to focus on effectiveness
- Allows firefighters to learn to better communicate their ideas and experiences which would lead to improved safety
- Will help lead to potential for risk and injury reduction and possibly fewer firefighter deaths
- Improvement in emergency operations

The LFD currently does not have an SOP requiring a PIA and has no standardized format to guide the PIA. For a PIA to be effective, it is important that a standardized process or SOP be implemented to ensure the process is standardized across the department. According to Alan Brunacini (1991):

> Without SOP's, a fire critique becomes a free-for-all of personalities and opinions. Such wild events become guessing games for the troops who fought the fire and are unsure about how the critique will be conducted and on what basis anything—or everything—will be reviewed. (p. 106)

According to *Fire Department Incident Safety Officer* (1999), "While the general approach of postincident analysis is to look back to an incident, it must not be forgotten that the overriding goal is to look forward to the future" (Dodson, p. 193-194).

It is important that a standardized process be implemented. One of the reasons for this is expressed by Gary Morris in that if the same basic questions are not asked at the PIA it will be difficult to detect trends and deficiencies at emergency operations (1988). Morris (1988) further states that:

> A formal critique program must be in place. It is most effective to establish a written policy and procedure that clearly explains the program and its objectives, and identifies which incidents will be selected for formal critiquing. The procedure should also spell out the methods of preparing for and conducting the critiques. (p. 14)

According to Douglas Cline (1999):

> It is true that many of the new techniques and equipment developed in the fire service are a direct result of lessons learned from emergency responses. This phenomenon is the reason why it is so important to review or critique emergency responses and training exercises. Valuable information and knowledge can be gained from these critiques resulting in safer and more efficient operations. (p. 1)

According to Barry Baker (1997) "Critique is considered one of the best, if not *the* best method to analyze current performance" (p. 15).

In order for a PIA to be successful, it must have several basic requirements. Dan Friend (1995) says it must be based on established procedures, consistent and timely, well packaged and attended, have strong facilitation, open and constructive, and focus on lessons learned. James Smith (1994) adds that a PIA can only be successful if an environment is created that is open

and participants in the PIA are honest about their observations.

Another important aspect of a successful PIA program is that the results be documented and distributed throughout the organization. Steve Kidd (2001) says, “Reviewing history is essential for improvement. This is why it is crucial that we write everything down for others who weren’t on the scene” (p. 25). Dan Friend (1995) recommends that these written results be distributed department wide.

In order for the PIA program to be successful, it is important to have the backing from management on the importance of the program. Gary Morris (1988) says, “Management’s demand for a written incident critique policy and procedure is the first step towards an effective critique process” (p. 14).

In review of the National Institute of Occupational Safety and Health reports of line of duty firefighter deaths, several factors show up in the reports that contribute to fatalities. These factors include the improper use of, or lack of; PPE, ICS, RIT teams, communications, and accountability. These same factors are associated with the safety problems that have been identified through the review of the LFD incident videotapes.

In 1979, the LFD suffered three firefighter deaths at the Underwoods restaurant fire. The investigation following the fire showed that improper maintenance of SCBA, no ICS system, and lack of accountability were contributing factors. As a result of this incident, the LFD has one of the best SCBA maintenance programs in the nation and has implemented an ICS, and an accountability program. The implementation of these programs although good for firefighter safety were, unfortunately, implemented reactively in response to a tragedy. A properly conducted PIA would allow the LFD to be proactive in its approach to firefighter safety, hopefully, preventing the LFD from suffering through this type of tragedy again.

According to Mark Morgan (1994), “By remembering the past, reinforcing strengths and enacting enhancements, we will heed the warnings and not be condemned to repeat history” (p. 20). According to Dan Friend (1995), “A practice of regular PIA for each incident may identify deficiencies and prevent a department from ever having to go through an investigation that follows an incident resulting in injuries or death of firefighters” (p. 3).

It is feasible to implement a formal PIA program for the LFD. A survey of LFD personnel shows that 96 percent of the firefighters that responded felt a PIA could be beneficial if it was properly conducted. To be effective, focus must be on actions taken and lessons learned and not on disciplinary issues. The PIA should be conducted on a regular, consistent, and timely basis. This can be accomplished by requiring that formal PIA’s be held for all second or greater alarm incidents, semi-formal PIA’s for all first alarm structure fires, and encouraging the use of informal PIA’s for all other incidents.

RECOMMENDATIONS

The LFD should incorporate the PIA SOP (Appendix A) into its procedures manual. In addition, it is recommended that the PIA be conducted utilizing the LFD PIA questionnaire (Appendix B), and the LFD PIA worksheet (Appendix C). The results of all formal PIA’s conducted should be documented and distributed department wide utilizing the LFD PIA report (Appendix D). This distribution can be accomplished by making these reports available on the fire department’s intranet page so all personnel can have access to them. Informal PIA’s with content beneficial to department personnel could also be documented and distributed department wide.

The PIA worksheet in Appendix C was designed primarily to guide the PIA for structural fire responses. It is recommended that supplemental checklists be developed for use in medical,

hazardous materials, heavy rescue, and dive emergencies. These checklists would ensure that all hazards and special operational issues associated with these types of incidents are addressed during the PIA.

Training of all officers should be conducted prior to implementation of the PIA program. The purpose of the training is to explain the objectives of the PIA program and how to effectively conduct a PIA. In addition, it is recommended this training be incorporated into the LFD Lieutenant Orientation program that trains new officers in their assigned responsibilities.

It is recommended that fire departments that do not have a formal PIA program in place should develop and implement a program. A formal PIA program can have a significant and positive impact on the health and safety of its members and lead to increased operational effectiveness.

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APPENDIX A
Lubbock Fire Department

	General Procedures	
	Records and Reports	
Post Incident Analysis Program		
06/24/02		Page 1 of 4

I. OBJECTIVE

A. To provide an objective means of analyzing fire department operations in a post-emergency environment.

B. To review the effectiveness of standard operating procedures at emergency incidents.

C. To provide information to all personnel that allows benefit from experience gained at an incident to improve operations at similar or future incidents.

II. POLICY

A. A Post Incident Analysis (PIA) shall be conducted on one of three possible levels depending on the nature of the emergency and the number of resources committed to the incident.

B. A formal PIA shall be conducted for all second alarm or greater incidents, firefighter injury involving hospitalization or fatality, or any incident requiring the response of a specialty team.

1. If a specialty team arrives on scene and starts operations in their specialty area a formal PIA shall be conducted.

2. If a specialty team is dispatched, but turned around by first arriving units a PIA may be conducted.

a) The specialty team officer shall contact the IC and discuss the operations that took place at the incident.

b) Based on this discussion the specialty team officer shall determine if a formal PIA should be conducted.

C. A semiformal PIA shall be conducted for all first alarm working structure fires or incidents involving a firefighter injury that does not require hospitalization.

1. Working structure fire shall be defined as a structure fire that requires the use of SCBA and a least one 1-¾ inch line to extinguish the fire.

D. An informal PIA shall be conducted, as needed, for all other types of emergencies.

III. PROCEDURES

A. Formal Post Incident Analysis

1. 2nd alarm and specialty team response emergencies.

   a) All LFD personnel that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that shift.

   b) Administrative, Training, Dispatch and FMO staff personnel that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that day.

      (1) At least 24 hours notice should be given to staff personnel about the scheduled PIA.

2. 3rd alarm or higher emergencies.

   a) Branch, Division and Group commanders that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that shift.

      (1) They IC may require attendance of individual company officers based upon their response to the PIA questionnaire form.

   b) Staff personnel that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that day.

      (1) At least 24 hours notice should be given to staff personnel about the scheduled PIA.

3. Company Officers shall complete the PIA Questionnaire and email to the Incident Commander (IC) before the end of the shift that the incident occurred.

   a) The facilitator should review these questionnaires prior to the conducting of the PIA.

4. The IC shall serve as the facilitator for the PIA.

   a) The IC is responsible for initiation of the formal PIA.

      (1) The formal PIA shall take place at the LFD training academy.

      (2) This PIA should not exceed 1 to 1 ½ hours in length.

   b) The IC may make arrangements with the training academy for a facilitator to manage the PIA that was not involved in the incident.

      (1) These arrangements should be made at least 24 hours before the scheduled PIA.

c) The IC shall notify and invite outside agencies and departments that may have responded to the incident to the PIA.

d) This PIA should take place within 72 hours of the incident.

5. The IC shall appoint a scribe to record points of discussion of major importance, recommendations, or suggestions as to possible solutions for problems encountered.

a) The scribe should not be chosen from among the officers involved in the incident.

6. The LFD PIA Worksheet shall be utilized to guide and document the discussion.

B. Semiformal PIA

1. All LFD personnel that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that shift.

2. Administrative and Training staff personnel that participated in the emergency shall be required to attend the PIA if they are scheduled for duty that day.

a) The FMO shall be informed of the semiformal PIA and shall have the option of attending this PIA.

3. Company Officers shall complete the PIA Questionnaire and email to the IC before the end of the shift the incident occurred.

a) The facilitator should review these questionnaires prior to the conducting of the PIA.

4. The IC is responsible for initiation of the semiformal PIA.

a) The IC shall serve as facilitator for the PIA.

b) The IC shall make arrangements for the time and place at which the PIA shall be conducted.

(1) The semiformal PIA should take place within 72 hours of the incident.

(2) The semiformal PIA should not exceed 1 hour in length.

5. The IC shall appoint a scribe to record points of discussion of major importance, recommendations, or suggestions as to possible solutions for problems encountered.

a) The scribe should not be chosen from among the officers involved in the incident.

6. The LFD PIA Worksheet shall be utilized to guide and document the discussion.

C. Informal PIA

1. The informal PIA is an informal discussion of the events that transpired during the incident.

a) The informal PIA is utilized at the company level after any type of an alarm to which the company may have responded.

(1) Such as Jaws responses, medical calls, etc.

b) Any personnel involved in the incident can request that a informal PIA be held.

2. The Company Officer shall serve as facilitator of the informal PIA.

3. Applicable portions of the LFD PIA checklist can be utilized to help guide the discussion.

a) The Informal PIA should focus on overall operational improvement.

(1) Training tips relating to the incident should be brought up for discussion.

4. No documentation of Informal PIA's is required.

a) The only exception would be if it would be of benefit to members of the department.

(1) This documentation should be sent to the Training Chief in Email form.

(2) This information will be posted on Fireline.

IV. Documentation

A. A final PIA report is to be completed for all Formal and Semi-formal PIA's.

1. The IC is responsible for the completion of this final PIA report.

B. The PIA report shall be completed within 7 days of the PIA.

1. Upon completion, the report shall be emailed to the Training Chief.

C. After review by the Training Chief the final PIA report shall be posted on Fireline.

D. All PIA's shall be entered in the training section of the LFD records management system.

APPENDIX B

LFD POST INCIDENT ANALYSIS QUESTIONAIRE

Incident #	Address:
Name:	Assignment:
Officer:	Firefighter:
Equipment Operator:	Firefighter

Please respond to the following PIA questions and send your responses to the Incident Commander. Respond by the end of today's shift and be prepared to discuss these at the PIA. Thank you for your help.

1. Describe the conditions of the emergency upon your arrival.

2. Describe your company's actions or assignments.

3. If you were a Branch/Division/Group officer, identify and describe the objectives of your Branch/Division/Group.

4. Identify and describe any unique problems you may have encountered.

5. Describe any events or actions at this incident that assisted you in accomplishing your objectives or tasks.

6. Describe any events or actions at this incident that may have hindered you in accomplishing your objectives or tasks.

7. Did you encounter any safety problems? If so, identify.

8. Did you experience any equipment failures? List/describe failures.

9. What would you do differently the next time?

10. Any recommended changes in SOP's, training, or equipment as a result of this incident?

APPENDIX C

LFD POST INCIDENT ANAYLSIS WORKSHEET

Date: Incident #:
IC: Location:
Apparatus: Type of Incident:

The PIA is a learning or training session. The PIA is not a finger pointing session and is not to be used as a disciplinary tool. Information or lessons learned as a result of this incident should be shared with everyone on the LFD. To help facilitate the PIA the following general format should be followed when conducting the PIA:

Alarm time: Review general conditions such as weather, time of day, dispatch information.
Review incident videotape.
First in unit gives report on actions taken and problems encountered.
IC gives report on actions taken and problems encountered.
Branch/Division/Group commanders give report on actions taken and problems encountered.
Functional areas assigned by IC give report on actions taken and problems encountered.
Outside agencies give report on actions taken and problems encountered.
Open up for questions, answers and comments.
Facilitator concludes PIA by summarizing key points.

Alarm and Notification:

- Adequate information from dispatch. Yes☐ No☐
  - Marc Card number given at dispatch Yes☐ No☐
  - Radio Channel assigned at dispatch Yes☐ No☐
- Communications effective with dispatch. Yes☐ No☐
- Response time within accepted limits. Yes☐ No☐
  (Within 5 minutes of alarm time)

Arrival:

- First in unit size up accurate/complete. Yes☐ No☐
- First in took/passed command. Yes☐ No☐
- Officer performed size up and developed action plan before taking action. Yes☐ No☐
- First in informed other units of initial actions. Yes☐ No☐
- Complied with 2 in 2 out. Yes☐ No☐
- Thermal imager utilized by first in. Yes☐ No☐

Incident Command:

- Written action plan developed and disseminated. Yes☐ No☐
- Updated size up given on arrival. Yes☐ No☐

- Face to face communications with command and DC prior to DC assuming command. Yes☐ No☐
- Transfer of command clear and smooth. Yes☐ No☐
- Command location announced. Yes☐ No☐
- Command location accessible. Yes☐ No☐
- Branches/Divisions/Groups clearly designated. Yes☐ No☐
- Officers designated as Branch/Division/Group commanders. Yes☐ No☐
    - Periodic progress reports given to command. Yes☐ No☐
- Personnel accountability system utilized. Yes☐ No☐
- RIT established. Yes☐ No☐
- Rehab established. Yes☐ No☐
- Fire ground communications clear. Yes☐ No☐
- EMS requested for standby. Yes☐ No☐
- Apparatus spotted in best location. Yes☐ No☐
- Pre-incident plan accurate, helpful, up to date. Yes☐ No☐ NA☐
- Staff personnel checked in with IC on arrival. Yes☐ No☐ NA☐
- Primary search all clear given. Yes☐ No☐
- Secondary search all clear given. Yes☐ No☐

- Second Alarm and greater fires:
    - Operation Chief assigned. Yes☐ No☐
        Who:
    - Planning section Chief assigned. Yes☐ No☐
        Who:
    - Logistics Officer assigned. Yes☐ No☐
        Who:
    - Safety Officer assigned. Yes☐ No☐
        Who:
    - PIO Assigned. Yes☐ No☐
        Who:
    - Liaison Officer assigned. Yes☐ No☐
        Who:
    - Finance Officer assigned. Yes☐ No☐
        Who:
- Appropriate outside agencies notified. Yes☐ No☐ NA☐
    List agencies:

Accountability:

- Once command established, arriving companies reported to command with passports . Yes☐ No☐
- FD On Scene software utilized. Yes☐ No☐
- Passport tag system utilized as backup. Yes☐ No☐
- Units report completed assignments and requested reassignment through command. Yes☐ No☐
- PAR conducted every 10 to 20 minutes. Yes☐ No☐
- Company Officer maintained crew accountability. Yes☐ No☐
- Crews released from rehab returned passports to accountability officer. Yes☐ No☐

RIT:

- RIT Personnel assigned from first alarm units. Yes☐ No☐
- Performed RIT size up of building. Yes☐ No☐
- RIT deployed in an effective area. Yes☐ No☐
- Sufficient number of RIT teams established. Yes☐ No☐
- Coordinated with IC to deploy safety line if not completed prior to RIT establishment. Yes☐ No☐
- Assembled appropriate tools for forcible entry and rescue. Yes☐ No☐
- Thermal imager and RIT bag at RIT staging area. Yes☐ No☐
- Ensured all floors of building firefighters operating on were laddered. Yes☐ No☐ NA☐
- If RIT activated for firefighter rescue, IC established back up RIT. Yes☐ No☐ NA☐
- If RIT activated for firefighter rescue, IC called for 2nd alarm. Yes☐ No☐ NA☐
- RIT monitored radio communications. Yes☐ No☐

Rehabilitation:

- Level I rehab established. Yes☐ No☐ NA☐
- Level II rehab established. Yes☐ No☐ NA☐
- Rehab officer from LFD assigned Yes☐ No☐
- EMS assigned to medically monitor personnel. Yes☐ No☐
- Personnel entering rehab bring accountability tags. Yes☐ No☐
- Crews entering rehab checked in through rehab officer. Yes☐ No☐
- Crews entering rehab rested minimum of 15 minutes. Yes☐ No☐

- Crew exiting rehab check out through rehab officer. Yes☐ No☐
- Rehab location adequate. Yes☐ No☐
- Red Cross/Salvation Army located close to rehab. Yes☐ No☐ NA☐
- Personnel rotated through rehab by 2-air bottle rule. Yes☐ No☐
- Medical monitoring documentation attached and filed with NFIRS report. Yes☐ No☐

Staging:

- Level I staging implemented. Yes☐ No☐ NA☐
  - Truck companies staged 1 block in direction of travel. Yes☐ No☐
  - Engine companies staged at closest hydrant. Yes☐ No☐
- Level II stating utilized. Yes☐ No☐ NA☐
  - Staging officer appointed. Yes☐ No☐
  - Units in staging kept crews intact. Yes☐ No☐

Ventilation:

- Type used:
- Appropriate for incident. Yes☐ No☐

Utilities:

- Fire department shut off. Gas☐ Electric☐ Water☐
- Appropriate utilities notified. Yes☐ No☐

Water Supply:

- Adequate fire attack lines, and flows utilized. Yes☐ No☐
- Supply/Relay line required. Yes☐ No☐
- Water supply adequate. Yes☐ No☐
- Water utility asked to boost pressure. Yes☐ No☐ NA☐

Salvage:

- Personnel in appropriate PPE. Yes☐ No☐

Overhaul:

- Personnel in appropriate PPE. Yes☐ No☐
- CO monitor utilized before allowing personnel to remove SCBA. Yes☐ No☐
- If FMO called to scene, overhaul limited to that required to extinguish the fire. Yes☐ No☐

List Branches, Divisions and Groups created and Officer in charge of each:

APPENDIX D

LFD POST INCIDENT ANALYSIS REPORT

Date:
Alarm Time:
Location:
Apparatus:
Alarms:
IC:

Alarm and Notification:

Size-up:

Operations:

Positive Outcomes:

Points of Improvement:

Lessons Learned:

APPENDIX E

Area Fire Department PIA Interview Questions

Name Rank Department

Date

1. Does your department have a formal Post Incident Analysis program?

2. Does your department have a SOP for a Post Incident Analysis program?

3. Does your department utilize a standardized Post Incident Analysis form?

4. Who is designated as the facilitator for the Post Incident Analysis?

5. Do you feel your Post Incident Analysis program is effective?

   Why?

6. Are the results of the Post Incident Analysis documented and distributed to personnel?

   How?

7. Do you train your officers in how to conduct a PIA?

APPENDIX F
LFD PIA Survey

Total survey response	72	

1. What is the average number of working fires that you respond to in a year?

		% of Total
1 to 5	24	33.33
6 to 10	24	33.33
11 to 15	12	16.67
16 to 20	11	15.28
over 21	3	4.17

2. What percentage of these incidents have you participated in a post incident analysis?

Average	10.539

3. Do you feel the post incident analysis sessions you have participated in have been effective?

Yes	40	55.56
No	26	36.11

Please explain why.

SEE PAGE "Question #3 Explanations" for Listing

4. If properly conducted do you feel a post incident analysis can be beneficial to the department?

Yes	69	95.83
No	2	2.78

5. For what type of incidents should a post incident analysis be conducted?
Mark all that apply

Medical Calls	23	31.94
Working 1st Alarms	39	54.17
Working 2nd Alarms	56	77.78
HazMat	49	68.06
Dive	42	58.33
Heavy Rescue	46	63.89
IC's Discretion	38	52.78

6. Who should facilitate a post incident analysis that is being conducted?

IC/CO	46	63.89
Training Div	12	16.67
Dep Chief	2	2.78
Fire Chief	1	1.39
Other Ind.	13	18.06

Additional comments/explanations:

SEE PAGE "Additional Explanations" for Listings

Question # 3 Explanations

* very good training
* HAVEN'T BEEN ANY
* work out what went right and wrong with the crew so the next one will go better
* They are not done often enough for the personnel attending to feel comfortable and confident in the situation and it's perceived consequences.
* Most have been positve, focused on how to do a better job next time.
* Too much focus is placed on what went wrong; it invariably turns into an ass-eating session instead of being constructive and educational.
* Learn what we did right and what we did that we could do better
* SOMETIMES PEOPLE COME TO THE ANALYSIS WITH POINTY FINGERS AND TINY EARS.
* HAVE NOT ATTENDED, ANY FORMAL PISD
* There is too much emphasis on what could have been done better instead of praise for what was done right. There seems to be adaquate recognition of problems but they never seem to be resolved. One critique emphasized that not enough radio communication w
* REVIEWS THE THOUGHT PROCESS OF DIFFERENT OFFICERS
* REINFORECES GOOD PRACTICE AND POINTS OUT AREAS NEEDING WORK
* Only negative issues were discussed
* They were gripe sessions instead of helping to see what went good and bad.
* Different approaches were pointed out
* IT SHOULD NOT BE AN ASS EATING, SHOULD BE A LEARNING PROCESS
* Yes, they allow me to have other prospectives of the same incident. + It is good for the men.
* Generally, most of the critique is a one-sided conversation with a Dep. Chief or D.C. directing the questions/comments.
* IN 2.5 YEARS AT I'VE BEEN AT THIS STATION WE'VE NEVER HAD ONE
* Firefighters look at these as a disciplinary activity instead of a learning one.
* constructive criticism is good, just trying to lay blame for something that did not go to suit the chiefs isn't so good. Lately there seems to be a lot of second guessing the first in officers. They are given the responsibility to make decisions and then come down on when they do so. I'm not talking about when they make a bad decision either. It is always easier to second guess someone when the incident is over but it should be in a constructive setting. Most of us are still firefighters and care about what we do .
* Brought into perspective things that were not obvious during the call that should have been!
* Always is a negative session when some things had to go right
* Usually a critique only takes place after a "bad" incident. Blame is fixed but nothing changes.
* to discuss what went right or wrong
* We learn what we as a team (Brass and FF's)did right and what we did wrong. I think it gave the brass a chance to get on the level of the FF's at the stations, and puts them in a position if used correctly, to effect a positive influence in they're subordinate's

***** Allows personnel to open discussion into if their actions were correct or need correction.

***** just one more chance fot the chief to chew on you

***** To help crews to do better in the future and to reinforce a job well done.

***** What went right, what could have been done better, problems encountered.

***** allows you to learn from the actions of yourself and others who participated

***** Only one version of the incident is given credibility (Chiefs version)

***** Lets everone who was involved know what others were doing, and feel.

***** to hear others' viewpoints on what was done well and what was not done well. the guys that are actually on the scene working these fires are the ones who have the best ideas as to what is working well and what is not.

***** Reinforced good aspects of incident response and suggested better or alternative ways to handle other aspects of the response.

* an open line of communication is exhibited in our district on our shift, no blame is put on anyone, it is truly a learning opportunity

***** tendency to turn into bashing session, only called for if Rhea thinks we messed up

***** MOST OF US KNOW AFTER LOOKING BACK WHAT WE DID NOT DO CORRECTLY OR IN THE PROPER ORDER.

***** Have not participated in any

***** Somewhat. Too much fault finding and finger pointing and denying responsibility and alibis.

***** All it is used for is to tell you what they think you did wrong at the incident . No that a boys just negitive feed back .

* Some policies have been changed with positive effects.

***** It helps when everyone is thinking and acting like they are on the same page. I see on almost every structure fire I am on at least one or two safety issues that need to be addressed not to slam any one person but to keep it from happening the next time out.

***** Works out problems encountered and were able to not have the same problems at the next fires in the same area.

* Some things could have been done differently that may or may not have helped.

***** feedback!

***** most are discussed informally with station personel after the call

***** It depends on whether they are used as a ass eating or what we did right and how can we get better

* Keeps everyone on the same page.

***** BRINGING TO LIGHT THINGS THAT WERE NOT READILY NOTICEABLE THAT SHOULD HAVE BEEN!!

* no formal organization. not positive. input went no farther than the room

***** Not well planned, no set objectives

***** SEEMED TO FOCUS ON WHAT ADMINISTRATION THOUGHT WENT WRONG EVEN THOUGH THE MEN AT THE SENE THOUGHT THERE WAS NO PROBLEM. MUCH MORE LIKE A WITCH HUNT THAN A LEARNING TOOL.

* A chance to talk about why and why not to do the things that were done.

* THE PARTS THAT WERE NOT BUTT CHEWINGS ARE USUALLY PRETTY GOOD
* We need to know what was done right/wrong to improve next time.
* It helps me to know what I did both right and wrong and helps me the next time to do it a little better.
* offers a chance to review your actions and improve reactions to the next incident
* They provide the opportunity for everyone to get the full perspective of what happened and to learn what was done correctly and what needs to be improved upon.
* new ideas for on scene communications when the radios are jammed with traffic
* Because the Deputy Chief told us we could not call the incidient what we thought it was!

Additional Explanations

* not all medical calls, just the ones where the
* The goal of the session should not be to put letters into people's files, but to prevent future mistakes.
* I DID NOT ANSWER QUESTION FIVE. I DON'T THINK ANY TYPE OF INCIDENT AUTOMATICALLY REQUIRES A PIA. I THINK IT SHOULD BE DONE ON AN AS NEEDED BASIS AND THAT ANY RANK FIREFIGHTER SHOULD BE ALLOWED TO VOICE THIS NEED.
* Too many critiques are conducted with the perception that they are a "witch hunt". This could be an invaluable tool, but at the same time, if not handled properly, become another vehicle alienating good men with the best of intentions.
* Thanks for asking.
* Thanks
* THIS SHOULD BE A LEARNING PROCESS ABOVE ALL !!!! THERE ARE OTHER VIEWS AND ACTIONS OTHER THAN THOSE IN COMMAND OR IN CHARGE OF THE INCIDENT. THERE ALSO MAY BE TIMES ACTIONS MAY BE DEVIATED FROM THE WAY THE BOOKS TEACH AND THOSE WHO ARE DOING THE PIA SHOULD HAVE AN OPEN MIND AND LISTEN WHY THEY WERE DONE THIS WAY. SAFETY SHOULD BE OF UTMOST IMPORTANCE AT ALL TIMES, SHOULD HAVE AN OPEN MIND DURING PIA, LOOK FOR WAYS TO IMPROVE WHAT HAPPENED,
* The guys that make it happen should conduct the incident analysis.
* I think the best venue for a post-incident review should be two parts: 1) I.C. review with officers/sector commanders to identify problems in communications, tactical objectives, safety as well as areas done well. 2) Sector commanders/officers with firefighters to relay information from "1)" and to add first-hand supervisor observations of actions taken during operations.
* PLEASE LET THIS BE CONSTRUCTIVE, NOT JUST AN OPPORTUNITY TO HAVE A FEW CHIEFS THAT WERE NOT EVEN THERE CHEW ON US. AFTER ALL, HIND SITE IS ALWAYS 20/20!
* All the Chiefs have been seen to back each other (no matter what) and it would not be constructive to either party to have the IC(Chief) or his supervisor running the analysis. I understand that the Chief's authority is paramount but is this to say his decisions should not be included in the analysis.
* Not everything is done "by the book"; common sense decisions should be encouraged.
* I may be beneficial for an uninvolved "moderator" to navigate the process in a standardized format.
* I don't think this should be used on every incident, but I think it is a good idea. Kelly Morman
* Someone not involved would most likely be more objective (better suited).

* incident analyses are very useful. i would like to see more of them done. not necessarily for every incident, but people who are involved in a particular incident have a pretty good idea as to when one would be beneficial. even at a company level for some medical calls, it is a good idea. AS LONG AS they are conducted properly with the intent of improving our service to the community and protecting our personnel. we all know that having the deputy chief come out just to criticize and "harp" on what was done wrong is not productive in improving relationships or changing how things are done. done in a positive manner, critiques can be very beneficial. thanks for your time, Chief.
* I believe that CISD should automatically be included in post incident analysis that covers incidents with a critical or traumatic outcome. This would eliminate the need for company officers to request CISD for his crew members. Some company officers may not feel the need for CISD when his younger, less experienced crew members may feel the need for CISD and be afraid to ask for it. I have also seen critical incidents where the crew was split for different assignments such as caring for different victims in a multi-victim incident where the more seasoned crew members had to deal with a more traumatically injured victim and have declined to ask for CISD for fear of what the "Rookie" might think of them. All members, no matter the years of experience, will react differently to critical incidents, and I believe that all will benefit from automatic CISD for critical incidents. Thanks for the chance to voice this opinion.
* personal opinion, Rhea needs to stay in office unless his presence is requested.
* THE POST INCIDENT SESSIONS CPULD BE GOOD IF IT IS NOT USED AS A BLAME SESSION FOR THINGS THAT DID NOT GO AS WELL AS IT SHOULD HAVE. ON LARGER FIRES, IT IS GOOD SOMETIMES TO TALK ABOUT WHAT HAPPEN AND UNDERSTAND SOME OF THE DECISIONS THAT WHERE MADE,BUT AS WE ALL KNOW THERE IS ALWAYS A BETTER WAY TO A STUCTURE FIRE LOOKING BACK ON THE INCIDENT.
* This should be a constructive and positive session, not for persons of higher authority to critcize the actions that took place. This should be a process to improve and/or change our methods and correct mistakes not discipline.
* I.C. and C. O. should be involved, but an uninvolved training div. officer should be in charge.
* It is easy to arm chair quarterback a fire or other incident if you were not the one calling the shots.
* I think that this is a good tool when it is not used to place blame or make excuses.
* I feel like if everyone take this seriously we can and will work out any problems that may arise on the fireground. This should be used as a training tool and not a finger pointing session and it will make a much more effective learning experience. Also we should draw on each persons perspective and their level of training and experience and not treat it as do it my way or the highway.
* The incidents above if a death has occured, or any out of the ordinary has occured. An average working structure fire where no one was injured is not cause for a post incident analysis
* Not all of the incidents checked above might need to be hashed out and some of the ones not checked may need to be scrutinized sometimes. I don' feel like there ought to be a fast and steady rule as to when and when not to have a PIA.
* all things good and bad should be discussed. The "upper brass" should attend these meetings ,

but not actually control or run the meeting. They should be there to obtain information and ideas to pass on to whole dept.(not to complain only but to also praise actions)

* Any incident could be used to learn, if used only as a teaching, learning tool.
* QUSTION #5 ON MAJOR MEDICAL CALLS. QUESTION #6 OFFICER INCHARGE AT THAT STATION
* Analysis doesn't have to be formal.
* people not involved in the incident should be available for reference only..ie training, fire chief etc
* I hope this is for the Department and not your personal class assignment. Like Chief Cooper's surveys